

"APPROVED FOR RELEASE: 09/19/2001

CIA-RDP86-00513R000616220020-2

247-2-A-10

APPROVED FOR RELEASE: 09/19/2001

CIA-RDP86-00513R000616220020-2"

Gornyy, G. Ya.  
 USSR/ Chemistry - Analytical chemistry  
 Card 1/1 Pub. 116 - 16/29  
 Authors : Gornyy, G. Ya.  
 Title : New reaction for group detection of alkaloids  
 Periodical : Ukr. khim. zhur. 21/6, 761-762, Dec 1955  
 Abstract : It was established experimentally that drops of an alkaloid solution when applied on a filter paper impregnated with a potassium iodoplatinate solution produce a bluish violet (less frequently a brownish-red) spot of the iodoplatinate alkaloid which cannot be washed off with water. In contrast to the generally employed reactions for the deposition of alkaloids the iodoplatinate reaction appears to be chromatic and is realized directly in purified chloroform, ether or alcohol extracts. Two USSR-Germ. references (1923-1951). Table.  
 Institution : Acad. of Sc., Ukr. SSR, Inst. of Geolog. Sc.  
 Submitted : May 14, 1955

Gornyy, G. Ya.

USSR/ Chemistry - Analytical chemistry

Card 1/1 Pub. 116 - 17/29

Authors : Gornyy, G. Ya.

Title : On the chemism of the Froehde reaction

Periodical : Ukr. khim. zhur. 21/6, 763-765, Dec 1955

Abstract : In order to confirm the correctness of the Froehde reaction (1866) the author investigated the properties of various phenols under conditions identical to the Froehde reaction as well as the reactions of various reducing agents with molybdic acid in the presence of concentrated sulfuric acid. It was found that the Froehde reaction is connected with the oxidation of the phenols into certain colored compounds and not with the formation of molybdic acid reduction products. Three references: 2 Germ. and 1 Russ. (1866-1923). Graph.

Institution : Acad. of Sc., Ukr. SSR, Inst. of Geolog. Sc.

Submitted : May 14, 1955

GORNYY, G.Ya.

Separating scandium from sedimentary ores, coal ashes, and certain minerals for the purpose of its quantitative determination and production. Ukr.khim. zhur. 23 no.6:792-798 '57. (MIRA 11:1)

1. Institut geologicheskikh nauk AN USSR.  
(Scandium)

GONCHAROV, Stepan Valentinovich [Honcharov, S.V.]; GORNYY, G.Ya. [Hornii, H.IA.],  
kand.khim.nauk, glavnyy red.

[Synthetic materials serving the people] Shtuchni materialy  
na sluzhbi liudyny. Kyiv, 1959. 35 p. (Tovarystvo dlia  
poshyrennia politychnykh i naukovykh znan' Ukrain's'koi RSR.  
Ser.5, no.12) (MIRA 12:12)  
(Ukraine--Synthetic products)

GORNYY, G.Ya. [Hornyi, H.IA.]

Determination of the entry form of scandium in the crystalline  
lattice of zircons. Geol.zhur. 21 no.5:95-97 '61.

(MIRA 14:10)

1. Institut geologicheskikh nauk AN USSR.  
(Scandium) (Zircon crystals)

S/073/62/028/002/004/006  
B101/B110

AUTHOR: Gornyy, G. Ya.

TITLE: Quantitative determination of praseodymium in mixtures of rare-earth metals

PERIODICAL: Ukrainskiy khimicheskiy zhurnal, v. 28, no. 2, 1962, 238-241

TEXT: The possibility of a quantitative determination of Pr in the presence of RE was studied. The method is based upon the formation of higher praseodymium oxides during calcination which separate in hydrochloric solution iodine from KI. The iodine is then titrated with  $\text{Na}_2\text{S}_2\text{O}_3$ . Before analysis, Ce and Tb must be removed by the iodate and the sulfate method, respectively. The other RE are converted into oxalates which are slightly calcined, dissolved in  $\text{HNO}_3$  (1:1), and the solution is then boiled down. Calcination at  $700^\circ\text{C}$  (2 hrs) in air follows next. The calcined RE oxides are mixed with KI and HCl in a  $\text{CO}_2$  stream, and the iodine liberated by 1-2 hrs' shaking in the dark is titrated. Higher praseodymium oxide obtained with a Pr content of up to 10% is called  $\text{PrO}_2$ , with 11-60% Pr it

Card 1/2

S/073/62/028/002/004/006  
B101/B110

Quantitative determination ...

is  $\text{Pr}_{10}\text{O}_{19}$ , and with >60% (praseodymium preparations) it is  $\text{Pr}_6\text{O}_{11}$ . There are 4 tables.

ASSOCIATION: Institut geologicheskikh nauk AN USSR (Institute of Geological Sciences AS UkrSSR)

SUBMITTED: April 4, 1960

Card 2/2



S/073/62/028/003/003/004  
B110/B101

AUTHOR: Gornyy, G. Ya.

TITLE: Quantitative determination of terbium in mixtures of rare earths of the yttrium subgroup

PERIODICAL: Ukrainskiy khimicheskiy zhurnal, v. 28, no. 3, 1962, 393-395

TEXT: Terbium was determined quantitatively in a preparation consisting of 96.66% terbium oxide with 0.04% calcium, iron, and copper oxides, and with 3.3% yttrium, gadolinium, and dysprosium oxides. Then 0.2 N KI solution was added to the weighed portion, and the mixture was dissolved in HCl (1:1) in a CO<sub>2</sub> atmosphere, after which this solution was diluted with H<sub>2</sub>O and titrated in the presence of amylum with 0.05 N Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub> solution. In agreement with literature data 5.15 ml 0.05 N Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub> solution was consumed. Standard nitrate solutions of terbium and yttrium were boiled down to moist salts, dissolved with H<sub>2</sub>O and precipitated with saturated solution of oxalic acid. The precipitates were calcined (500°C).

Card 1/2

Quantitative determination of terbium ...

S/073/62/028/003/003/004  
B110/B101

In the oxide mixtures (mg): 2(Tb) + 98(Y); 5(Tb) + 95(Y); 10(Tb) + 90(Y);  
20(Tb) + 80(Y), 1.90; 4.92; 9.50; 19.35%  $Tb_4O_7$ , respectively, were  
found by titration with 0.01 N  $Na_2S_2O_3$ . There is 1 table.

ASSOCIATION: Institut geologicheskikh nauk AN USSR (Institute of  
Geological Sciences AS UkrSSR)

SUBMITTED: June 4, 1960

Card 2/2

GORNYI, G.Ya.

Quantitative determination of praseodymium in mixtures of rare  
earth elements. Ukr.khim.zhur. 28 no.2:238-241 '62. (MIRA 15:3)

1. Institut geologicheskikh nauk AN USSR.  
(Praseodymium--Analysis) (Rare earths--Analysis)

GORNYI, G. Ya.

Quantitative determination of terbium in mixtures of rare  
earth elements of the yttrium subgroup. Ukr. khim. zhur. 28  
no.3:393-395 '62. (MIRA 15:10)

1. Institut geologicheskikh nauk AN UkrSSR.

Terbium--Analysis) (Rare earths)

L 18298-63

ENP(q)/EWT(m)/EDS AFFTC/ASD/ESD-3 RM/JD/J3

ACCESSION NR: AP3005002

S/0073/63/029/008/0859/0863

ATTNORS: Gorny\*, G. Ya.; Gavrilova, E. P.

TITLE: Determining total rare earths in the presence of larger amounts of other elements

SOURCE: Ukrainskiy khimicheskiy zhurnal, v. 29, no. 8, 1963, 859-863

TOPIC TAGS: oxalate; oxalate precipitation, rare earth elements

ABSTRACT: A new modification of the oxalate precipitation method was developed for the quantitative removal of rare earths from large amounts of other elements, with very little contamination by the latter. The solubilizing effect of the oxalate complexes of the admixed elements is removed by neutralizing the complexes with  $\text{CaCO}_3$ . A mechanism for the neutralization is proposed. Orig. art. has: 2 tables.

ASSOCIATION: Institut geologicheskikh nauk AN USSR (Institute of geological sciences, Academy of sciences UkrSSR)

Card 1/2/

IVANTSEV, Mikhail Nikolaevich; GORNYI, Gennadiy Yegorovich; KOSYKOVA, Olga Anatol'evna; YAKIMENKO, Galina Dmitriyevna, Prilozhenie  
uchastnye: GAVRILOVA, L.F., inzh.-khimik; KAZANTSEVA, A.I., inzh.-  
khimik; LOGVINA, L.A., inzh.-khimik; USLONTSEVA, L.A., inzh.-  
khimik; GUDIMENKO, L.F., inzh.; NAZAREVICH, Ye.S., inzh.;  
SHKVARUK, R.N., inzh.; ORLOVA, L.A., inzh.; BASIMAKOVA, S.G.,  
inzh.-geolog; BURKSER, Ye.S., otv. red.; MEL'NIK, A.F., red.

[Geochemistry and analytic chemistry of rare-earth elements.  
Pt.1. Accessory rare-earth minerals and elements of the cerium  
subgroup in the Ukrainian Crystalline Shield] Geokhimiya i ana-  
liticheskaya khimiya redkozemel'nykh elementov. Kiev, Naukova  
dumka. Pt.1. Ukladennyye redkozemel'nye mineraly i elementy  
tseriovoy podgruppy ukrainskogo kristallicheskogo shchita.  
1964. 164 p. (Seriya nauk USSR. Instytut raslari-bavkh nauk.  
Trudy. Seriya petrografii, mineralogii i geokhimi, no.11).  
(Mir 1964)

1. Oshen-korrektirovannyy tekst (for Burks).  
(Mir 1964)

MOLODCHAYA, Natal'ya Trofimovna; PAPERNOV, Lev Zakharovich; GAFILY,  
I.Ye., prof., red.; KONIKH'EVA, V.P., red.

[Studio audio equipment and sound amplification systems]  
Apparatura studийnykh traktov i sistem zvukousileniia. Mo-  
skva, Sviaz'izdat, 1963. 173 p. (MIRA 17:6)

GORNYY, N. B.

Investigation of the groups of electrons produced by the absorption of x-rays arising from gases. N. B. Gornyy and V. M. Dukel'skiy. *J. Exptl. Theoret. Phys. (U.S.S.R.)* 17, 943-51 (1937).—By means of an ionization chamber filled with a mixt. of a light and a heavy gas ( $H_2 + A$ , air +  $C_2H_5Br$ , air +  $SnCl_4$ , and air +  $CH_3I$ ) it was possible to sep. the ionizing influences of the various electron groups resulting from absorption of x-rays by atoms of a heavy gas. The coeffs. of internal conversion,  $\alpha$ , on excitation of the K-level are 0.87 for A, 0.50 for Br, 0.37 for  $Sn$ , and 0.50 for I. The higher value for I (at. no. 53) as compared to  $Sn$  (at. no. 50) agrees with the data of Berkeley (C. A. 28, 3301) and Stephenson (C. A. 28, 5755). Its discrepancy from the theoretical value may be due to insufficient consideration of the possible no. of electron jumps with increasing nuclear charge. P. H. H.

PHYSICAL LITERATURE CLASSIFICATION



PROCESSES AND PROPERTIES INDEX

3

Investigation of the photoeffect in the total reflection of x-rays. N. H. Gornyi. *J. Exptl. Theoret. Phys.* (U. S. R. R.) 11, 74-84 (1941); *J. Phys.* (U. S. S. R.) 4, 247-58 (1941) (in English). — Exptl. curves for the reflection coeff. of x-rays and of the photoelec. emission from a lacquered and an unlacquered silver mirror at glancing angles near the limiting angle of reflection show that the max. of emission does not correspond with the limiting angle, but rather with the angle at which the depth of penetration of x-rays becomes equal to the depth from which photoelectrons can emerge. This explanation accounts for discrepancies between the crit. angles computed by Ehrenberg and Jentsch (cf. *C. A.* 23, 3625) and their exptl. data. F. H. R.

Phys. Inst, Leningrad State U.

ASR-114 METALLURGICAL LITERATURE CLASSIFICATION

GORNYY, N.B.

Gornyy, N.B. "Electron emission from metallic monocrystals," Sbornik trudov Lenigr. elektrontekhn. in-ta svyazi im. Bonch--Bryuevicha, Issue 4, 1949, p. 83-95--- Bibliog: 7 items --- Conclusion. Beginning: Issue 3, 1948

SO: U-3566, 15 March, 53, (Letopis 'Zhurnal 'nykh Statey, No. 14, 1949).

NA GORNYI, N.B.

211-M. Determination of the Orientation of Metallic Monocrystals. (in Russian); N. B. Gornyi, *Zapiski Vsesoyuznogo Mineralogicheskogo Obshchestva*, ser. 2, v. 80, Oct.-Dec. 1951, p. 245-257.  
A method using reflected light rays. Results are compared with Laue-grains. Data are tabulated (M23)

FD 401

GORNYI, N. B.  
USSR/Physics - Secondary electron emission

Card 1/1

Author : Gornyy, N. B.

Title : Secondary electron emission for the various facets of copper single-crystals which are covered with single-crystal layers of cuprous oxide

Periodical : Zhur. eksp. i teor. fiz. 26, 79-87, Jan 1954

Abstract : Investigates the dependence of the coefficient of secondary electron emission,  $\delta$ , upon the energy of the primary electrons,  $V_p$ , for three faces of copper single-crystal (100), (110), and (111), which are covered by single-crystal layers of  $Cu_2O$ , and also for polycrystal copper covered by  $Cu_2O$  films. Establishes that the curves  $\delta = f(V_p)$  differ but slightly for investigated objects. Any difference is due to the different values of the work function.

Institution : Leningrad Electrical Engineering Institute of Communications

Submitted : December 18, 1952

GORINYY, N. B.

Secondary electron emission for various faces of Al<sub>2</sub>O<sub>3</sub> crystals of zinc covered by monocrystalline layers of zinc oxide. N. B. Gorinyy (Leningrad Physico-Mathematical Institute, USSR Acad. Sci. Inst. for Theoretical Phys.). The coeff. of secondary electron emission was determined experimentally for the two faces (0001 and 1010) of monocryst. zinc as well as of polycryst. zinc in the energy range from 25 to 250 eV. The energy dependence of the secondary electrons was detd. over the range 0 to 1000 v. for the primary electrons. It is shown that the primary as well as those for the secondary electrons differ considerably for the 2 samples studied. The ratio of elastically scattered electrons is greater for the (1010) than for the (0001) sample. The difference in the curves  $\delta = f(V_p)$  for the (0001) and the (1010) faces can be explained only on the basis of differences in the work of emission from the surface, and are evidently influenced by differences in the processes of secondary emission taking place deep in the emitter along different crystallographic directions.

From H. Kautzmann.

FD-1300

USSR/Physics - Secondary electrons

Card 1/1 : Pub. 146-11/18

Author : Gornyy, N. B.

Title : ~~Investigating the energy distribution of secondary electrons from copper single-crystals covered with single-crystal films of cuprous oxide~~

Periodical : Zhur. eksp. i teor. fiz., 26, 327-336, Mar 1954

Abstract : By the method of retarding electrical field the author investigates the energy distribution of truly secondary electrons from the faces of copper single-crystal (100), (110) and (111), which have been covered with single-crystal films of cuprous oxide and from polycrystalline copper covered with polycrystalline film of cuprous oxide. For the polycrystalline specimen the author obtains distribution curves representing within the limits of errors of measurements smooth curves with one ordinary maximum without inflections. In the distribution curves for the single-crystal specimens one can observe besides the main maximum the presence of inflections due to additional maxima. However, the considerable errors peculiar to the applied method do not permit one to consider completely proved the existence of additional maxima. Thanks L. M. Rukhovich and A. Mittel'man.

Institution : Leningrad Electrical Engineering Institute of Communications

Submitted : December 18, 1952

GORNY, N.B.

100% of the total  
distribution fraction of the total  
N. B. GORNY  
100% of the total  
distribution fraction of the total  
N. B. GORNY  
100% of the total  
distribution fraction of the total  
N. B. GORNY

GORNYI, N. B.

FD-794

USSR/Physics - Secondary electrons

Card 1/1 Pub. 146-7/21

Author : Gornyy, N. B.

Title : Study of the energy distribution function of secondary electrons in a copper single-crystal coated by single-crystal film of cuprous oxide using method of electric differentiating

Periodical : Zhur. eksp. i. teor. fiz., 27, 171-179, Aug 1954

Abstract : An experimental study of distribution function of true secondary electrons according to energies for a copper single-crystal (III) face coated with single-crystal film of cuprous oxide with surfaceplane (III) and for polycrystalline copper with polycrystalline cuprous oxide coating was conducted by electric differentiation method. Distribution curves of secondary electrons according to energies of single crystal specimens exhibited besides the main peak several additional peaks. Indebted to L. M. Rakhovich. Twenty-three references including 12 foreign.

Institution : Leningrad Electrical Engineering Institute of Communication

Submitted : December 19, 1953



USSR/Physics - Electron emission

FD-992

Card 1/1 Pub. 146 - 16/20

Author : Gornyy, N. B.

Title : Nonelastic reflection of electrons from the surface of cuprous oxide

Periodical : Zhur. eksp. i teor. fiz., 27, No 5 (11), 649-651, Nov 1954

Abstract : An extension of the author's earlier work on an investigation of the energy distribution of truly secondary electrons from a single-crystal surface of cuprous oxide (ibid., 27, 171, 1954), in which he established the presence of additional maxima, found due to the electrons of the crystalline lattice that had received definite portions of energy from the primary electrons. Here the author discusses the influence of so-called tertiary electrons and a method for finding the corrections to the distortion introduced by the variation of the tertiary electron current. A detailed report will appear shortly. Six references (e.g., A. Ya. Vyatkin, L. M. Rakhovich, A. R. Shul'man and Ye. I. Byakinin, etc.).

Institution : Leningrad Electrical Engineering Institute of Communication

Submitted : February 23, 1954

USSR/Physics - Contact potentials

FD-3251

Card 1/2 Pub. 146 - 10/44

Author : Gornyy, N. B.

Title : Investigating the structure of the surface of cuprous oxide films on the various facets of a copper single-crystal and determining the contact potential difference between these surfaces

Periodical : Zhur. eksp. i teor. fiz., 29, No 6(12), Dec 1955, 808-816

Abstract : An investigation, by the method of diffraction of slow electrons, of the structure of surfaces of cuprous oxide films which are formed on the different facets of a copper single-crystal. It is established that a single-crystal  $\text{Cu}_2\text{O}$  film with plane (111) parallel to the base is formed on the facets of a copper single-crystal (100) and (111), and on the facet (110) there is also formed a single-crystal  $\text{Cu}_2\text{O}$  film, but of less perfect crystalline structure and with a surface plane (110). Investigations of the contact potential difference by method of displacement of volt-ampere characteristics showed that the  $\text{Cu}_2\text{O}$  films on the facets of copper single-crystal (100) and (111) possess identical work function (0.2 volt), and consequently also identical crystalline orientation.  $\text{Cu}_2\text{O}$  film

Card 2/2

FD-3251

on copper facet (110) possesses large work function (0.3 volt), and also of stronger absorption of residual gas molecules than  $\text{Cu}_2\text{O}$  films on facets (100) and (111), which indicates different properties (orientation) of  $\text{Cu}_2\text{O}$  film on Cu facet (110) and  $\text{Cu}_2\text{O}$  films on Cu facets (100) and (111). Twenty-two references.

Institution : Leningrad Electrotechnical Institute of Communications

Submitted : July 3, 1954

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**CIA-RDP86-00513R000616220020-2**

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**CIA-RDP86-00513R000616220020-2"**

Volt-ampere characteristics curves for secondary emission  
in the region of lowered potential on a cathode  
Gerasim M. A. Kozlov-Brovskiy, *Zh. tekhn. fiz.*, 1978, No. 1, p. 100.  
Zasl. Zh. tekhn. fiz. 26, 1978, No. 1, p. 100.  
by means of luminescent probe in the form of a  
R. A. Butkova and V. A. Pashchenko, *Zh. tekhn. fiz.*, 1978, No. 1, p. 100.  
of growth of the principal canal along the surface  
point to point gap of 10  $\mu$ m.  
influence of geometric parameters of high field  
rent transmission lines on the generation of  
corona discharges. I. Unipolar lines.  
N. S. Pashchenko, *Zh. tekhn. fiz.*, 1978, No. 1, p. 100.

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APPROVED FOR RELEASE: 09/19/2001

CIA-RDP86-00513R000616220020-2"

GORNYI, N.B.

3000

537.533.74  
147. INVESTIGATION OF INELASTIC ELECTRON REFLECTION FROM A CUPROUS OXIDE SURFACE.

N.B. GORNYI.

Zh. eksper. teor. Fiz., Vol. 30, No. 1, 160-70 (1950). In Russian.

Inelastic scattering of electrons incident on a cuprous oxide surface has been studied by a method of electric differentiation in a spherical condenser circuit. Inelastically reflected electrons suffering discrete energy losses have been found among the electrons reflected from monocrystalline as well as polycrystalline surfaces. The discrete energy losses equal the energy required to transfer an electron of the crystal lattice from a filled to an allowed zone. It is shown that the appearance of inelastically reflected electrons undergoing discrete energy losses is due to the same mechanism as that responsible for the appearance of discrete groups of genuine secondary electrons previously found by the author. A.

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**CIA-RDP86-00513R000616220020-2"**



GORNYY, N.B.

CARD 1 / 2

PA - 1647

SUBJECT USSR / PHYSICS  
 AUTHOR GORNYY, N.B.  
 TITLE The Investigation of the Angular Distribution of Secondary  
 Electrons Emitted from Cuprous Oxide and their Energy Distribu-  
 tion.  
 PERIODICAL Zhurn.eksp.i teor.fis, 31, fasc.3, 386-392 (1956)  
 Issued: 12 / 1956

The experimental order for these investigations consisted of a vacuum device the spherical part of which, which is covered with aquadag in the inside and which has a diameter of 110 mm, serves as a collector. The collector is sub- divided into five spherical zones which are insulated among one another. The secondary electrons were able to impinge only upon the four upper zones, the fifth zone comprising the entire lower half of the sphere. The electrode with the emitter which is fitted in the center of the sphere, had the shape of a cylinder of 20 mm diameter and 17 mm length. This electrode contained a bifilar heating filament and a thermocouple for measuring temperature.

Test results: A diagram shows the delay curves obtained with each zone and with the entire collector at the energy  $V_p = 400$  MeV of the primary electrons and at a temperature of  $400^\circ$  of the emitter. A second diagram shows the curves of the energy distribution of the electron, which was obtained by electric differentiation at similar conditions. The shape of all these curves changes considerably on transition from one zone to another. The shape of these curves

PA - 1647

CARD 2 / 2

Žurn.eksp.i teor.fis, 31, fasc.3, 386-392 (1956)

is discussed in detail. The delay curves of the secondary electrons belong to the zones from 1 to 4 are distorted by tertiary electrons. However, the aforementioned apparatus contains also a further source of distortions. Thus, the secondary electrons impinging between the separate zones upon glass are able to charge the glass, and by this the field may be distorted at the collector. A further diagram shows the curves of angular distribution. The distortions caused by tertiary electrons necessitate corrections which are discussed here.

Discussion of test results: The corrected curves of angular distribution agree best with the correspondingly selected rules ( $\cos \varphi$  and  $\cos^2 \varphi$ ). If  $V_k$  increases, the distortion caused by tertiary electrons diminishes. Within the domain of positive  $V_k$  the curves of the energy distribution of the secondary electrons change for the following reasons: If  $V_k$  diminishes, the number of tertiary electrons, after overcoming the resistance of the field, increases. Besides, the number of tertiary electrons transferred from the other zones to the given zone grows. The first-named reason increased and the second reduced the values of the points on the corresponding curves. Next, the causes of distortions in the case of a negative  $V_k$  are mentioned.

INSTITUTION:

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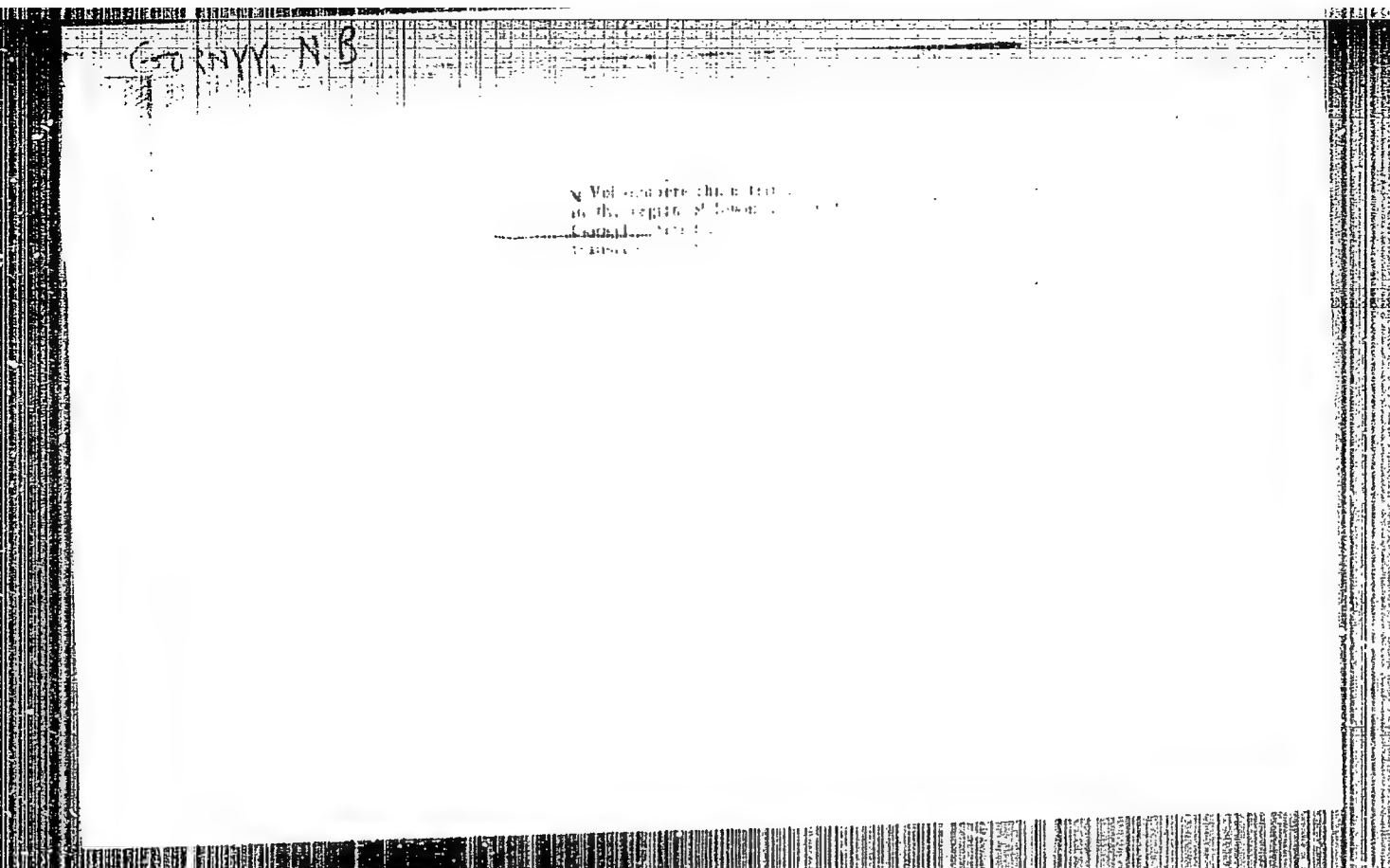
DISCRETE ENERGY, PHASE 1, 1  
FROM A MOBILE UNIT, 1, 1, 1  
1471 4, 1, 1, 1, 1, 1, 1  
The results of the test  
operation of the unit  
are as follows: 1, 1, 1  
1, 1, 1, 1, 1, 1, 1  
1, 1, 1, 1, 1, 1, 1  
1, 1, 1, 1, 1, 1, 1

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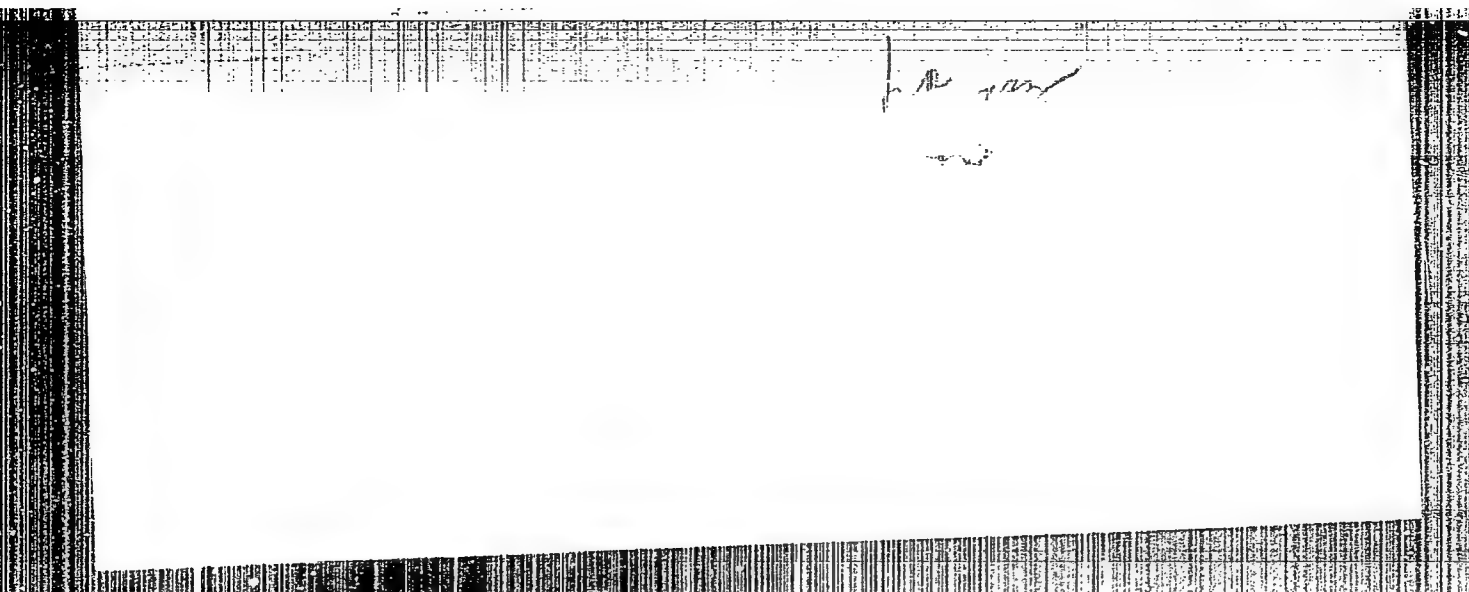


GORVY, N.B.

✓ Angular distributions of secondary electrons  
and their energy distribution  
Page 107 P. 4, 540-50 105" English  
CA 51.412

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CIA-RDP86-00513R000616220020-2"

*Gornyy, N.B.*

56-3-3/59

**AUTHORS:** Gornyy, N.B., Reytsakas, A.Yu.

**TITLE:** Investigation of Characteristic Electron Energy Losses and Secondary Electron Emission from  $\text{GeO}_2$  (Issledovaniye kharakteristicheskikh poter' energii elektronov i vtorichnoy elektronnoy emissii  $\text{GeO}_2$ )

**PERIODICAL:** Zhurnal Eksperim. i Teoret. Fiziki, 1957, Vol. 33, Nr 3, pp. 571-575 (USSR)

**ABSTRACT:** The characteristic energy loss of electrons reflected by 2 germanium plates of the n- and p-type covered with  $\text{GeO}_2$  was measured by means of the electric differentiation in the spherical capacitor. The corresponding characteristic energy loss spectra are for both plate types well agreeing. The energy loss spectra for  $\text{GeO}_2$  and  $\text{MoO}_2$  which have an equal crystal lattice are similar to each other. The differences in the spectra are due only to the different lattice spacing. The secondary electron emission factor of  $\text{GeO}_2$  is almost double as great than that of pure germanium. There are 3 figures, 1 table and 7 Slavic references.

**SUBMITTED:** March 1, 1957.

**AVAILABLE:** Library of Congress

Card 1/1



AUTHOR:

Gornyy, N. B.

48-22-5-1/22

TITLE:

Investigation of Discrete Electron Energy Losses in Mg, MgO, BeO and Ge (Issledovaniye diskretnykh poter' energii elektronov v Mg, MgO, BeO i Ge) Data of the VIIIth All-Union Conference on Cathode Electronics, Leningrad, October 17 - 24, 1957 (Materialy VIII Vsesoyuznogo soveshchaniya po katodnoy elektronike, Leningrad, 17-24 oktyabrya 1957 g.)

PERIODICAL:

Izvestiya Akademii Nauk SSSR, Seriya Fizicheskaya, 1958, Vol. 22, Nr 5, pp. 475 - 485 (USSR)

ABSTRACT:

These losses were found in most recent times in the irradiation of a number of substances (cuprous oxide /Reference 1/, nickel- and molybdenum-targets /Reference 1/, MoO<sub>2</sub> (Reference 3/, GeO<sub>2</sub> /Reference 4/) by electrons of relatively low energies (~100 eV). A survey of publications (References 5 - 13) on the problem is given. The author investigated the losses of the reflected electrons and the distribution of the true secondary electrons of Mg, MgO, BeO and Ge accordingly by means of the method of the electric differentiation (References 13, 14). On this occasion he came to the following conclusions: 1) The

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Investigation of Discreet Electron Energy Losses  
in Mg, MgO, BeO and Ge

48-22-5-1/22

parallel investigation of the discreet energy losses in the reflection of electrons with relatively low energies ( $\sim 100$  eV) and of discreet groups of true secondary electrons (Mg, MgO, BeO and Ge) has shown that these losses are conditioned by interzone transitions (mezhdazonnyye perekhody Pl.), which satisfy the formula (2):

$$W = \frac{h^2}{8m} \left( \frac{n}{d} \right)^2 .$$

With increasing energy of the impinging electrons the probability of the discreet losses of high energies increases. 2) Discreet losses of the lowest energy values (for Mg - 3eV, for MgO - 5eV, for BeO - 4eV and for Ge - 2eV) were found, which do not satisfy the formula (2). Apparently the excitation of these discreet losses is caused by an other mechanism. Finally the discussion on this abstract is summarized, in which took part A. I. Pyatnitskiy, N. D. Morgulis, I. M. Bronshteyn, L. N. Dobretsov and the author. There are 8 figures, 8 tables and 28 references, 7 of which are Soviet.

Card 2/2

1. Electrons--Energy
2. Magnesium--Electrical properties
3. Magnesium oxides--Electrical properties
4. Berium oxides--Electrical properties
5. Germanium--Electrical properties

AUTHOR: Gornyy, N. B.

SOV/56-35-1-41/59

TITLE: The Discrete Energy Losses of Electrons in Solid Bodies and the Yield of Secondary Electrons (Diskretnyye poteri energii elektronov v tverdykh telakh i vykhod vtorichnykh elektronov)

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1958, Vol. 35, Nr 1, pp. 281 - 283 (USSR)

ABSTRACT: The author first mentions several earlier papers dealing with this subject. It is interesting to compare the values of the discrete energy losses  $V_p - V_k$  with the values of the work function (rabota vykhoda)  $e\phi$  and with the maximum value of the coefficient  $\delta_{max}$  of the second emission.

A table demonstrates schematically the discrete energy losses of the incident electrons and the value of  $e\phi$ . The discrete energy losses were measured in the author's laboratory. The last column of this table gives the values of  $\delta_{max}$  for the same minerals for which the discrete energy

losses were obtained. According to the results of this table, the substances investigated may be subdivided into

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The Discrete Energy Losses of Electrons in Solid  
Bodies and the Yield of Secondary Electrons

SOV/56-35-1-41/59

3 groups: 1) The substances for which all the values of the discrete losses are higher than  $e\phi$  have a high yield of secondary electrons. To these substances there belong  $MgO$ ,  $CaO$ ,  $BaO$ ,  $NaCl$ , and  $KCl$ . 2) The substances for which the most intensive discrete energy losses are lower than  $e\phi$  have a low yield of secondary electrons ( $Ge$  and  $MoO_2$ ). An intermediary group of substances at the same time, have discrete losses with energy values higher and lower than  $e\phi$ . This group corresponds mainly to low values of  $V_p$ . The secondary electrons, which are generated within the substances, can lose their energy by excitation of the electrons of the valence zone only if their energy is not less than the minimum energy of the discrete losses. Transitions between the zones play an important part in the secondary emission of the insulators and semiconductors; they depend mainly on the quantity  $\delta$ . There are 1 figure and 9 references, 7 of which are Soviet.

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The Discrete Energy Losses of Electrons in Solid  
Bodies and the Yield of Secondary Electrons

SOV/56-35-1-41/59

ASSOCIATION: Leningradskiy elektrotekhnicheskii institut svyazi  
(Leningrad Electrotechnical Institute of Communications)

SUBMITTED: March 8, 1958

Card 3/3

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A005/A001

Translation from: Referativnyy zhurnal, Fizika, 1960, No. 8, p. 269, # 20699

AUTHORS: Gornyy, N.B., Reytsakas, A.Yu.

TITLE: Pulse Compensating Circuit for Investigation of Secondary Electron  
Emission From Semiconductors and Dielectrics

PERIODICAL: Tr. Leningr. elektrotekhn. in-ta svyazi, 1959, No. 1 (38), pp. 73-83

TEXT: To lower the error in the determination of the coefficient  $\delta$  of the secondary electron emission from dielectrics a pulse compensating circuit is developed, which allows the simultaneous measurement of the primary and secondary electron currents. The circuit presented makes it possible to measure at  $\delta > 1$  and  $\delta < 1$ . The measurement results are presented (the yield of secondary electrons and the delay curves) obtained with the given circuit for the three compounds:  $\text{MoO}_2$ ,  $\text{BeO}$ ,  $\text{MgO}$ . The sensitivity of the circuit and the error in the measurements are estimated. X

Author's summary

Translator's note: This is the full translation of the original Russian abstract.

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24(2)

AUTHOR: Gornyy, N. B.

SOV/56-37-2-3/56

TITLE: Discrete Energy Losses of Electrons and the Secondary Emission of CdO

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1959, Vol 37, Nr 2(8), pp 340-348 (USSR)

ABSTRACT: As shown by numerous earlier papers (Refs 1, 3, 5-8) shortly mentioned here, the author dealt with these problems already in detail. Several particular features concerning the interrelation between the discrete electron energy losses and the crystal structure of the investigated substances are described; an investigation of these conditions in substances similar to MgO and having the same crystal structure appears to be of interest, and therefore CdO was chosen as an object for this purpose. The sample used was a round CdO plate of 0.5 mm thickness (made available by V. P. Zhuze) which was prepared in a here described manner. A description of the vacuum device ( $3 \cdot 10^{-7}$  torr) is to be found in reference 8. Figure 1 shows 4 diagrams: the distribution curves of the inelastically reflected electrons at  $V_p$  (energy of the inciding electrons) = 30, 50, 100 and 145 v at 250°C;

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Discrete Energy Losses of Electrons and the  
Secondary Emission of CdO

SOT/56-37-2-3/56

all curves show peaks which are characteristic of discrete energy losses. A table shows values of discrete energy losses of electrons reflected on CdO. Secondary electron emission was investigated on the same device. Figure 2 shows the energy distribution curves of the real secondary electrons at 250°C and  $V_p = 30, 50, 100$  v; figure 3 shows the dependence of the coefficient of a secondary emission  $\delta$  on  $V_p$  at 20 and 400°C. At  $V_p = 500$  v  $\delta_{\max}$  is about 1.25.  $\delta$  is, however, only to a very low degree dependent upon  $V_p$ . Figure 4a shows the delay curves at  $V_p = 150$  and 500 v at 400°C, and figure 4b shows the energy distribution curves of the secondary electrons, obtained by numerical differentiation of the delay curves. The two distribution curves practically coincide, and so do the values of the most probable electron energies. These experimentally found facts are discussed in the following. It was found that the spectra of the two face-centered cubic crystals CdO and MgO are actually similar, the differences are due to the difference in the lattice constants. The groups of real secondary electrons

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Discrete Energy Losses of Electrons and the  
Secondary Emission of CdO

S07/56-37-2-3/56

of CdO, which have discrete energies, are produced by a single type of mechanism yielding those discrete electron energy losses. The small magnitude of  $\sigma_{\max}$  confirms the already previously made assumption concerning the dependence of  $\sigma_{\max}$  on the ratio between the minimum of the discrete energy losses and the electron work function. The author finally thanks M. M. Kozlovskiy and A. G. Podgayskiy for their help in connection with measurements. There are 4 figures, 1 table, and 15 references, 12 of which are Soviet.

ASSOCIATION: Leningradskiy elektrotekhnicheskii institut svyazi (Leningrad Electrical Engineering Institute for Communications)

SUBMITTED: February 14, 1959

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20778

S/181/61/003/003/003/030  
B102/B214

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1137, 1138, 1143

AUTHOR: Gorny, N. B.

TITLE: Mechanism of discreet energy losses of electrons in germanium

PERIODICAL: Fizika tverdogo tela, v. 3, no. 3, 1961, 698-700

TEXT: The experimentally determined distribution curves of the energy of electrons scattered in germanium were given in an earlier paper (Ref. 1: N. B. Gorny, Izv. AN SSSR, ser. fiz. 22, 475, 1958). The present paper gives an analysis of these curves, the object being to obtain exact values of the discreet energy losses on scattering. The experimental curves were taken for a germanium layer obtained by evaporation in a vacuum. These curves are shown in a figure for different energies  $V_p$  of the incident electrons. The energy values of the peaks of the discreet losses ( $V_p - V_k$ ) are given in a table in volts. Except in one case, the peak energy is in good

agreement with the formula:  $W = \frac{h'^2}{8m} \frac{h^2 + k^2 + l^2}{a^2}$  which is valid for a cubic Ge

lattice. In this formula,  $h'$  is Planck's constant,  $hkl$  the Miller indices  
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B102/B214

Mechanism of ...

(last row of the table),  $a$  the Ge lattice constant, and  $m$  the electron mass. The formula was obtained on the assumption that the incident electron imparts its energy to an electron of the lattice to transfer it to a so-called quasi-steady state. The  $W$  values in eV are given in the last but one row of the table. The value  $V_p - V_k = 16$  v is not in agreement with the formula.

This energy corresponds to the plasma-oscillation energy  $W_p = \frac{h'}{2\pi} \left( \frac{4\pi n' e^2}{m} \right)^{1/2}$ , where  $n'$  is the concentration of the valence electrons,  $e$  the charge, and  $m$  the mass of an electron. In another case, the peak of discreet losses ( $V_p - V_k \sim 1-2$  v) can be described by neither of the two formulas. Two peculiarities of this peak are to be observed, which distinguish it from the other cases: 1) In this case, the peak intensity does not decrease with increasing  $V_p$  but increases markedly; 2) The discreet energy losses increase systematically with increasing  $V_p$  (from 1v to 2v on raising  $V_p$  from 30 to 140v); the other peaks show no systematic dependence on  $V_p$ . This means that this peak has an origin entirely different from that of all the other peaks, for example, the production of an electron-hole pair (that is, transfer of an

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electron from the valence band to the conduction band). The value  $V_p - V_k = 1\text{v}$  is very close to the value of the forbidden band width of Ge (0.78 ev). A study of the optical constants for germanium in the quantum energy range 1-10ev showed that the absorption coefficient has maxima at quantum energies of 2.5 and 4.4 ev which lie near the first two peaks at 2 and 4.6 ev. Thus, three mechanisms of energy loss of electrons in germanium can be distinguished: 1) electron-hole pair production, 2) excitation of lattice electrons to higher states, and 3) plasma oscillations. There are 1 figure, 1 table, and 5 references: 2 Soviet-bloc and 3 non-Soviet-bloc.

ASSOCIATION: Leningradskiy Elektrotekhnicheskiy institut svyazi im. M. A. Bonch-Bruyevicha (Leningrad Electrotechnical Institute of Communications imeni M. A. Bonch-Bruyevich)

SUBMITTED: January 18, 1960

Card 3/3

L 38879-66 EWT(1) INF(c) AT  
ACC NR: AF6018568

SOURCE CODE: UR/0181/66/008/006/1939/1942

AUTHOR: Gornyy, N. B.

ORG: Leningrad Electrotechnical Institute of Communication im. M. A. Bonch-Bruyevich  
(Leningradskiy elektro-tekhnicheskii institut svyazi)

TITLE: Plasmon photoeffect and secondary electron emission

SOURCE: Fizika tverdogo tela, v. 8, no. 6, 1966, 1939-1942

TOPIC TAGS: plasmon, secondary electron emission, photoeffect, excited electron state, resonance absorption, plasma wave absorption

ABSTRACT: Since the hitherto prevalent point of view that the photoeffect and secondary emission are connected with a single-electron excitation mechanism does not explain many experimental data, the author points out on the basis of experimental data that an appreciable role is played by collective (plasmon) oscillations of the interacting electrons in these phenomena. Since experiments on Al, Mg, Ag, and other substances have confirmed the fact that a plasmon can experience decay and emit a photon, and the inverse process has also been observed, the author proposes that the plasmon energy, produced upon resonant absorption of light, can be transferred after the plasmon decay to conduction electrons. If the electron acquires enough energy, it can leave the solid and photoemission can thus occur. Similarly, resonant absorption of electrons by a solid should lead to the occurrence of plasmons, which decay and transfer their energy to secondary-emission electrons. Experimentally observed peaks of this nature,

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gathered from a large number of published papers and connected with plasmon phenomena, are presented for Al, Ag, Ge, and NaCl. The energy balance of these processes is briefly discussed. Orig. art. has: 1 figure.

SUB CCDE: 20/ SUBM DATE: 20Dec65/ ORIG REF: 008/ OTH REF: 015

Card 2/2

GORNYI, V.

The club and its active members. Voen. znan. 41 no.4:3" Ap '65.  
(MIRA 18:3)

USSR / Farm Animals. Cattle.

Q-2

Abs Jour : Ref Zhur - Biol., No 14, 1958, No 64441

Author : Vishnyakov, N. K.; Gorobchenko, M. F.

Inst : Not given

Title : Inheritance of Butterfat Productiveness and Other Milk Properties in Siberian Simmental Crossbreeds

Orig Pub : Zhivotnovodstvo, 1957, No. 8, 65-69

Abstract : According to the data provided by a qualitative evaluation of the Siberian-Simmental crossbreeds of the 1-4 generations in the sovkhoses and kolkhoz breeding farms of the Altay Kray, the crossbreeds obtained by an "absorption" crossing surpassed the crossbreeds produced by a "reproduction" crossing, in relation to milk yield, yearly butterfat production, and live weight, but they yielded in regard to the fat content of the milk. The conclusion is drawn that a change from "absorption" crossing to "reproduction" crossing under conditions of the Altay Kray is unfounded.

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GORDCHENKO, M.F.

Butter fat production of cows. Agrobiologia no.4:134-135  
Jl-Ag '58. (MIRA 11:9)

1. Altayskiy nauchno-issledovatel'skiy institut sel'skogo  
khozyaystva.

(Butterfat)

GOROBCHENKO, O.P. [Horobchenko, O.P.]; SUKHOBURUS, S.V.

Duration of fertilizers' action. Nauka i zhyttia 11 no. 4:40 Ap '61.  
(MIRA 14:5)

(Fertilizers and manures)

SAMOYLOV, B.N.; SKLYAREVSKIY, V.V.; GOROBCHENKO, V.D.;  
STEPANOV, Ye.P.

Asymmetry of the beta radiation from Co <sup>60</sup> nuclei polarized in  
a cobalt-iron alloy. Zhur. eksp. i teor. fiz. 40 no.6:1871-  
1874 Je '61. (MIRA 14:8)

(Beta rays)  
(Cobalt—Isotopes)  
(Cobalt—Iron alloys)

S/056/61/041/006/018/054  
B102/B138

AUTHORS: Samoylov, B. N., Sklyarevskiy, V. V., Gorobchenko, V. D.

TITLE: Determination of the sign of the local magnetic field on nuclei of gold dissolved in iron or nickel

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 41, no. 6(12), 1961, 1783-1786

TEXT: In a previous paper (Ref. 2: ZhETF, 40, 1871, 1961) the authors have reported on a method of determining the magnitude and sign of a local magnetic field from the asymmetry in angular distribution of the  $\beta$ -radiation of polarized nuclei. Theoretical problem are discussed first. The asymmetry, which is defined as  $\xi_\beta = [N(0) - N(\pi)]/N_0$ , where  $N_0$  denotes the isotropic count, is given by

$$\xi_\beta \approx - \frac{\frac{1}{2} + 2\sqrt{\frac{1}{2}} \lambda/\mu}{1 + (\lambda/\mu)^2} \frac{p \mu_n H_n}{W k T} \quad (4);$$

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Determination of the sign of the local ... S/056/61/041/006/018/054  
B102/B138

$p = \sqrt{W^2 - 1}$  is the electron momentum,  $\lambda$  and  $\mu$  are parameters, linear combinations of the nuclear matrix elements as defined by Morita-Morita (Phys. Rev. 109, 2048, 1958),  $\mu_N$  is the nuclear magnetic moment and  $H_N$  the local field. The experimental arrangement has been described in Ref. 2. After activation by thermal neutrons the specimens, containing ~0.3% by weight gold and ~1% by weight iron and nickel, respectively, were annealed at ~1000°C for 2-3 hr.  $\epsilon_N$  was plotted as a function of  $1/T$  and after corrections had been incorporated, it was found from the gradient of the straight lines that:  $\epsilon_N = -(8.9 \pm 0.3) \cdot 10^{-3} T^{-1}$  for gold in iron and  $\epsilon_N = -(1.6 \pm 0.1) \cdot 10^{-3} T^{-1}$  for gold in nickel. With Eq. (4) the following was found

$$H_N = (6.2 \pm 0.2) \frac{1 + (\lambda/\mu)^2}{1/2 + 2\sqrt{1/2} \lambda/\mu} \cdot 10^3 \text{ Oe}; \quad H_N = (1.1 \pm 0.07) \frac{1 + (\lambda/\mu)^2}{1/2 + 2\sqrt{1/2} \lambda/\mu} \cdot 10^3 \text{ Oe.} \quad (A)$$

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Determination of the sign of the local ...

for gold in iron and gold in nickel, respectively. With R. M. Steffen's value  $\lambda/\mu = -1 \pm 0.7$  (Phys. Rev. 118, 763, 1960) the local field strength  $H_p \approx -1.0 \cdot 10^6$  oe is calculated for iron and is in agreement with earlier measurements by the authors (ZhETF, 38, 359, 1960). In nickel it is  $\approx 1.8 \cdot 10^5$  oe, which is 5.6 times less, but in both cases it is in the opposite direction to the domain field. This could either be attributed to the contact field of the inner s-shells electrons or to contact interaction with polarized electrons. The latter, however, is in contradiction with results by Ye. I. Kondorskiy (ZhETF, 40, 381, 1961). The authors thank Ye. K. Zavoyskiy, L. V. Groshev, Ya. A. Smorodinskiy, D. P. Grechukhin, D. F. Zaretskiy, Yu. M. Kagan and L. D. Puzikov for discussions and O. A. Chilashvili, V. N. Agureyev, N. V. Razzhivin, I. B. Filippov, N. Ye. Yukovich, V. A. Drozdov and V. D. Sheffer for assistance. There are 2 figures and 8 references: 4 Soviet and 4 non-Soviet. The four most recent references to English-language publications read as follows. B. N. Samoilov et al. Proc. VII Int. Conf. Low Temp. Physics, Toronto, 1960, p 171; L. D. Roberts, J. O. Thomson. Bull. Amer. Phys. Soc., 6, 230. 1961;

Card 3/4

Determination of the sign of the local ...

S/056/61/041/006/018/054  
B102/B138

D. A. Goodings, V. Heine. Phys. Rev. Lett., 5, 370, 1960; A. J. Freeman.  
R. E. Watson. Phys. Rev. Lett., 5, 498, 1960.

SUBMITTED: July 17, 1961

Card 4/4

SAMOILOV, B. N., SHEVCHENKO, V. V. and ~~CHERNOMIR, V. D.~~

"The sign of the local magnetic field on model of spin diffusion in  
iron and nickel"

report to be submitted for the 8th Intl. Conf. on Low Temperature Physics (IUPAP)  
London, England, 16-22 Sep62



GOROBCHENKO, V. D., LUKASHEVICH, I. I., SAMOYLOV, B. N., STEPANOV, YE. P., and  
SKLYAREVSKIY, V. V., ALESHIN, K. P.,

"Unsplit Absorption line of  $Dy^{161}$  of Natural Width in  $Dy_2O_3$  at  $t = 500^\circ C$ ,"

report presented at the 3rd Intl. Conf. on the Mossbauer Effect, Cornell Univ.,  
New York, 4-7 Sep 63

GOROBCHUK, G.P.; KIRILYIN, P.G. KORMILITSYN, N.S.; SVOBODIN, Ye.N.;  
SKVROTSOV, N.G., STERELYUKHIN, V.A.

Model of a system for automating scientific experiments in carrying  
out technological research. Vych. sist. no.8:27-31 '63.  
(MIRA 17:12)

GOROBCHUK, V.M.; SEMIKIN, V.L.

Reducing output-signal pulsations of the E-2D converter in the  
EAUS system. Avtom. i prib. no.4:68-70 O-D '63. (MIRA 16:12)

1. Lisichanskiy filial Instituta avtomatiki Donetskogo soveta  
narodnogo khozyaystva.

GORDON, A.

Box Making

Marking boxes by branding Mias. ind. SSSR 23, no. 1 Jan/Feb. 1954.

9. Monthly List of Russian Accessions, Library of Congress, August 19~~54~~<sup>58</sup>, Uncl.  
52

1. GORBATOV, V.: GOROBETS, A.
2. USSR (600)
4. Packing House Products
7. Producing canned "stewed meat" in no. 14 cans.  
Mias. ind. SSSR, 23 no. 6, 1952.
9. Monthly List of Russian Accessions, Library of Congress, March, 1953.  
Unclassified.

GOROBETS, A., inzhener.

New technical charts for cutting tin plates. Mias.ind.BSSR 25 no.2:  
34-37 '54. (MLRA 7:5)

1. Direktor konservnogo zavoda Ulan-Udenskogo myasokombinata.  
(Canning industry)

GOROBYETS, A.

~~Instructional material~~

Structural defects of the "ZIK" labeling machine. Mias.ind. SSSR  
26 no.4:9-11 '55. (MIRA 8:10)

1. Direktor konservnogo zavoda Ulan-Udenskogo myasokombinata  
(Labeling machines)

GOROBYTS, A.

Improving the semiautomatic machine for soldering no.14 cans.  
Mias.ind.SSSR 26 no.5:17-21 '55. (MLRA 9:2)

1.Direktor konservnogo zavoda Ulan-Udenskego myasekonservnogo  
kombinata.  
(Solder and soldering) (Ulan-Ude--Canning industry)



KALITIN, Nikolay Trofimovich; KOGAN, Naum Grigor'yevich; GOROBETS, Alla  
Borisovna; SOKOLIN, N.N., inzhener, redaktor; BOEROVA, Ye.N., te-  
khnicheskii redaktor

[Maintenance of railroad tracks in sections with electric traction,  
automatic blocking, and electric switch centralization] Soderzhanie  
puti na uchastkakh s elektricheskoi tiagoi, avtoblokirovkoi i elektri-  
cheskoi tsentralizatsii strel'ok; opyt puteit'sev Sverdlovskoi dorogi.  
Moskva, Gos. transp. zhel-dor. izd-vo, 1957. 63 p. (MLRA 10:4)  
(Railroads--Track)

GOROBETS, A.D.

Effect of certain factors on the degree of accumulation of lactic acid in meat. Vopr.pit. 17 no.1:93-94 Ja-F '58. (MIRA 11:4)

1. Iz kafedry veterinarno-sanitarnoy ekspertizy (zav. - prof. I.S. Zagayevskiy) Belotserkovskogo sel'skokhozyaystvennogo inatituta.  
(MEAT--ANALYSIS) (LACTIC ACID)

GOROBETS, A. D., Cand Vet Sci -- (diss) "Effect of the pre-slaughtering condition of large horned cattle on the degree of accumulation of glycogen in the muscles and the preservation period of the meat." Belaya Tserkov', 1960. 16 pp; (Ministry of Agriculture Ukrainian SSR, Belotserkovskiy Agricultural Inst); 100 copies; price not given; (KL, 17-60, 165)

GOROBETS, A.D.

Effect of various factors on the glycogen and lactic acid  
content of beef. Vop. pit. 18 no. 6:63-64 N-D '59. (MIRA 14:2)

1. Iz kafedry veterinarno-sanitarnoy ekspertizy i patologicheskoy  
anatomii (zav. - prof. I.S. Zagayevskiy) Belotserkovskogo  
sel'skokhozyaystvennogo instituta.  
(BEEF) (GLYCOGEN) (LACTIC ACID)

GOROBETS, A.G.

Producing ribbed pipes. Stan.i instr. 25 no.4:31-32 Ap '54. (MIRA 7:6)  
(Pipe)

SOLGALOV, E.V., gornyy inzh.; GORDBETS A.K., gornyy inzh.

Ventilation arrangements in stopes where the method of top slicing  
is used. Gor.zhur. no.3:30-33 Mr '61. (MIRA 1463)

1. Nauchno-issledovatel'skiy gornorudnyy institut, Krivoy Rog.  
(Krivoy Rog Basin—Mine ventilation)

GOREBETS, A.K., inzh.; KOVSHULYA, F.A., inzh.; SOLGALOV, E.V., inzh.;  
TORGOVNIKOV, B.M., inzh.

Results of testing new sprayers. Bezop.truda v prom 4 no.6:10-12  
Je '60. (MIRA 14:9)

1. Kemerovskiy nauchno-issledovatel'skiy institut gornorudnoy  
promyshlennosti.  
(Spraying and dusting equipment—Testing)

KOVSHULYA, F.A., inzh.; TORGOVNIKOV, B.M., inzh.; SHARUN, V.G., inzh.;  
GOROBETS, A.K., inzh.

Systems of the ventilation and the improvement of their designing.  
Bezop. truda v prom. 5 no.8:15-18 Ag '61. (MIRA 14:8)

1. Krivorozhskiy nauchno-issledovatel'skiy institut gornorudnoy  
promyshlennosti.

(Mine ventilation)



SOIGALOV, E.V., gornyy inzh.; GOROBETS, A.K., gornyy inzh.; BOKLAN, V.G.,  
gornyy inzh.

1. Study of the processes of creation, distribution, and carrying  
out of dust subsequent to the detonation of an overhead charge.  
Gor. zhur. no.3:67-69 Mr '62. (MIRA 15L7)

1. Nauchno-issledovatel'skiy gornorudnyy institut, Krivoy Rog.  
(Krivoy Rog Basin--Mine dusts) (Blasting)

BOKLAN, V.G., inzh.; GOROBETS, A.K., inzh.

Improving the working organization of the underground transportation  
in mines. Bezop.truda v prom. 7 no.7:10-11 J1 '63. (MIRA 16:9)

1. Krivorozhskiy nauchno-issledovatel'skiy institut gornorudnoy pro-  
myshlennosti.

(Krivoy Rog Basin--Mine haulage--Safety measures)

GORYSHIN, N.I.; GOROBETS, A.M.

Vertical model of a gradient "polythermostat" with five chambers.

Vest. LGU 17 no.15:124-126 '62. (MIRA 15:8)

(Physiological apparatus) (Thermostat)

1. NAME T. S. I., GOLODETS, A. M.
2. USSR (60)
4. Tomatoes - Leningrad Province.
7. Influence of additional pollination of the first cluster on the maturation and yields of tomatoes in Leningrad Province. Vest. Len. Un. No. 1, 1952.

*2087 031*

9. Monthly List of Russian Accessions, Library of Congress, February 1953. Unclassified.

GOROBETS, A. M.

SHISHKIN, B. K., professor; ROMANKOVA, A. G., kandidat biologicheskikh nauk, starshiy nauchnyy sotrudnik; MARKOV, G. E., doktor biologicheskikh nauk, dotsent; DANILEVSKIY, A. S., kandidat biologicheskikh nauk, dotsent; SHTEYNBERG, D. M., doktor biologicheskikh nauk; LOMAGIN, A. G., aspirant; SELL'-BEKMAN, I. Y., mladshiy nauchnyy sotrudnik; ZHINKIN, L. N., doktor biologicheskikh nauk, professor; IIATOV, V. S., student V kursa; KOZLOV, V. Ye. kandidat biologicheskikh nauk starshiy nauchnyy sotrudnik; KARTASHEV, A. I., Kandidat biologicheskikh nauk, starshiy nauchnyy sotrudnik; NITSENKO, A. A., starshiy nauchnyy sotrudnik; VASILEVSKAYA, V. K., doktor biologicheskikh nauk, dotsent; RYUMIN, A. V., kandidat biologicheskikh nauk; NAUMOV, D. V., kandidat biologicheskikh nauk, mladshiy nauchnyy sotrudnik; KHOZATSKIY, L. I., kandidat biologicheskikh nauk, dotsent; GOROBETS, A. M., kandidat biologicheskikh nauk, starshiy nauchnyy sotrudnik; GODLEVSKIY, V. S., assistant; GERBIL'SKIY, N. L., doktor biologicheskikh nauk, professor; ALEKSANDROV, A. D., professor; KOLODYAZHNYI, V. I.; TURBIN, N. V.; ZAVADSKIY, K. K.

[Theory of species and the formation of species]. Vest. Len. un. 9 no. 10:43-92 0 '54/ (MLRA 8:7)

1. Chlen-korrespondent Akademii nauk SSSR (for Shishkin, Aleksandrov)

(Continued on next card)

\* SR. Sci. Assoc., CAND. BIOLOGICAL SCI.

SHISHKIN, B. K., professor; ROMANKOVA, A. G., kandidat biologicheskikh nauk, starshiy naychnyy sotrudnik, and others.

[Theory of species and the formation of species]. Vest. Len. un. 9 no. 10:43-92 0 '54. (MLRA 8:7)

2. Leningradskiy gosudarstvennyy universitet (for Shishkin, Romankova, Markov, Ipatov, Kozlov, Kartashev, Godlevskiy, Gerbil'skiy, Aleksandrov)
3. Zoologicheskii institut Akademii nauk SSSR (for Shteynberg, Naumov)
4. Kafedra entomologii Leningradskogo gosudarstvennogo universiteta (for Danilevskiy).
5. Kafedra darvinizma Leningradskogo gosudarstvennogo universiteta (for Lomagin, Gorobets).
6. Kafedra geobotaniki Leningradskogo gosudarstvennogo universiteta (for Nitsenko).
7. Kafedra botaniki Leningradskogo gosudarstvennogo universiteta (for Vasilevskaya).
8. Kafedra zoologii pozvonochnykh Leningradskogo gosudarstvennogo universiteta (for Khozatskiy).
9. Leningradskoye otdeleniye Vsesoyuznogo instituta udobreniy, agropochvovedeniya i agrotekhniki (for Sell'-Bekman)
10. Institut eksperimental'noy Meditsiny Akademii meditsinskikh nauk SSSR (for Zhinkin)

(Origin of species)

GOROBETS, A.M.

On the controversial problems of Darwinism ("Discussion on the problem of species and species formation"; Uchenye zapisi of the Tomsk University, no.27, 1956. Reviewed by A.M. Gorobets). Vest. IGU 12 no.3:138-142 '57. (MIRA 11:5)

(Origin of species)

GOROBETS, A.M.

Discussing the problem of intraspecific biological differentiation  
at the 13th scientific session of Leningrad University. Nauch.  
dokl.vys.shkoly;biol.nauki no.3:190-192 '58. (MIRA 11:12)  
(VARIATION (BIOLOGY))



GOROBETS, A.M.; kand. biol. nauk

~~Life expectancy of tomato pollen.~~ Dokl. Akad. sel'khoz. 23 no.1:11-15  
'58. (MIRA 11:5)

1. Leningradskiy ordena Lenina gosudarstvennyy universitet imeni  
A.A. Zhdanova. Predstavleno akademikom D.S. Brezhnevym.  
(Tomatoes) (Pollen)

GOROBETS, A.M.

Scientific jubilee session devoted to the one-hundredth anniversary  
of the publication of G. Darwin's "Origin of species." Vest. LGU 15  
no.9:143-146 '60. (MIRA 13:4)

(EVOLUTION)

GOROBETS A.M.

Effect of the position of fruit on the plant on the quality of seeds  
in tomatoes. Vest LGU 15 no.21:5-11 '60. (MIRA 14:4)

(Tomatoes) (Seed production)

NOVIKOV, Ivan Ivanovich; GOROBETS, A.M., kand. biolog. nauk, nauchnyy  
red.; VOROB'YEV, G.S., red. izd-va; GURDZHIYEVA, A.M., tekhn.  
red.

[Is everything expedient in living nature?] Vse li tselesoobraz-  
no v zhivoi prirode. Leningrad, Vses. ob-vo po raspr. polit. i  
nauchn. znaniy RSFSR, 1961. 59 p. (MIRA 15:12)  
(Zoology—Ecology)

ZAVADSKIY, K. M.; GOROBETS, A. M.; KHOD'KOV, L. Ye.; KHAKHINA, L. N.

Some results of the study on the populations of higher plants.  
Trudy PBI no.19:17-34 '62. (MIRA 16:1)

1. Laboratoriya evolyutsii populyatsiy Petergofskogo  
biologicheskogo instituta.

(Plant populations)

GOROB-TS, A. M.; PIROZHNYA, L. V.

Infructescence ability and susceptibility to Phytophthora of  
tomato hybrid fruits in the year of crossing. Vest LGU 19 no.  
9:52-58 '64. (MIRA 17:7)

RUZNETSKAYA, L.I.; CHEREPANOVA, N.I.; COLOBETS, A.M.

Preliminary study of Phytophthora infestans de Bary strains on tomatoes in Leningrad Province. Nauch.dokl.vys.shkoly; biol. nauki no.4:180-182 '65. (MIRA 18:10)

1. Rekomendovana laboratoriyami mikologii i evolyutsii populyatsiy Biologicheskogo nauchno-issledovatel'skogo instituta Leningradskogo gosudarstvennogo universiteta im. A.A.Zhdanova.

L 22366-66 ENT(1)/7 JK  
ACC NR: AP6005101 (A) SOURCE CODE: UR/0325/65/000/004/0180/0182

AUTHOR: Pshedetskaya, L. I.; Cherepanova, N. P.; Gorobets, A. M. 29

ORG: None 8

TITLE: Preliminary study of the *Phytophthora infestans* de Bary strain on tomatoes under Leningrad regional conditions

SOURCE: Nauchnyye doklady vysshey shkoly. Biologicheskii nauki, no. 4, 1965, 180-182

TOPIC TAGS: horticulture, plant disease, fungus, plant parasite

ABSTRACT: This investigation in 1963 of the resistance of different varieties of tomato plants to *Phytophthora infestans* included a determination of the strains of the fungus collected from the tomatoes at the experimental plots of the Leningrad University Biological Institute. Only strain 4 and possible strain 0 (as determined according to the Shick scale by means of plant differentiators) were isolated

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L 22365-55

ACC NR: AP6005101

from all six varieties of tomatoes. Strains 1 and 1.3 were observed in 2 instances, but in no case were aggressive strains with a 3 or 4 scale rating observed. This was explained by the favorable growing season in 1963. Further studies may expose a greater variety of fungus strains infesting tomatoes. Orig. art. has: 1 table.

SUB CODE: 06/ SUBM DATE: 12Oct64/ ORIG REF: 001/ OTH REF: 003

Cord 2/2dda

GORUB

89-4-5-9/26

AUTHORS: Aglintsev, K. K., Gorobets, A. N., Kasatkin, V. P.,  
Kondakova, E. S.

TITLE: Dosimetric Characteristics of the Composite Fission Fragments  
of Uranium (Dozimetricheskiye kharakteristiki smesi oskolkov  
deleniya urana)

PERIODICAL: Atomnaya Energiya, 1958, Vol. 4, Nr 5,  
pp 461 - 464 (USSR)

ABSTRACT: The dosimetric characteristics are determined by computation  
and are compared with the available experimental data. Thus  
satisfactory correspondence is reached. From the diagrammatical  
representation the following limiting values can be taken:

I. Total activity of the uranium fission fragments:

a)  $t_0$  (radiation time) = 60 d

$\tau$  (cooling time) =  $\begin{cases} 20 \text{ d} & \sim 260 \text{ C/kW} \\ 400 \text{ d} & \sim 8 \text{ C/kW} \end{cases}$

Card 1/3

89-4-5-8/26

Dosimetric Characteristics of the Composite Fission Fragments of Uranium

b)  $t_0 = 100 \text{ d}$

$$\tau = \begin{cases} 20 \text{ d} \\ 400 \text{ d} \end{cases} \quad \begin{matrix} \sim 300 \text{ C/kW} \\ \sim 11 \text{ C/kW} \end{matrix}$$

c)  $t_0 = 150 \text{ d}$

$$\tau = \begin{cases} 20 \text{ d} \\ 400 \text{ d} \end{cases} \quad \begin{matrix} \sim 380 \text{ C/kW} \\ \sim 19 \text{ C/kW} \end{matrix}$$

II.  $\gamma$ -equivalent of the mixture of uranium fission fragments:

a)  $t_0 = 60 \text{ d}$

$$\tau = \begin{cases} 20 \text{ d} \\ 400 \text{ d} \end{cases} \quad \begin{matrix} \sim 40 \text{ g radium equivalent/kW} \\ \sim 0.4 \text{ g radium equivalent/kW} \end{matrix}$$

Card 2/3

There are 3 figures, 3 tables and 4 English references.

09-4-5-8/26

Dosimetric Characteristics of the Composite

Fission Fragments of Uranium

SUBMITTED: September 5, 1957

AVAILABLE: Library of Congress

1. Fission fragments—Analysis 2. Uranium—Fission

Card 3/3